To: Rodriguez, Dante[Rodriguez.Dante@epa.gov]
Cc: Ginny Hatch[ghatch@ypt-nsn.gov]
From: Dietrick McGinnis
Sent: Fri 7/24/2015 10:58:00 PM
Subject: OU7 Comments (draft for discussion)

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Dante,

Thanks so much for taking the time for the call today. Ginny ask me to forward these draft comments for your use, the official letter to follow next week.

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Document: Yerington Mine Draft OU-7 RI Work Plan CSM and DQOs

Reviewer: Yerington Paiute Tribe

Specific Comments:

#	Section Page	Comment
1	1.2 4	(*From the first bulleted item)* The statement "concentrations diminished with distance from the Site along the length of the drain" is not well stated in reference to the data provided. None of the studies referenced were comprehensive for COIs for the site, none included the entire length of the Drain, and at least some were of questionable quality control. There is evidence of decreasing concentrations of some parameters for some sections; it would not be incorrect to state "the limited data availability for some reaches of the Wabusks Drain indicate the potential that concentrations diminished with distance from the Site."
2	1.2 4	*(From the second bulleted item)* The Drain is also operated by the Yerington Paiute Tribe who maintain their reach of the Drain. Since they are not WRID or property owners, they should be added to the list.
3	1.2 4	*(From the fourth bulleted item)* Indicators of erosion on the site indicate that the Wabuska Drain has historically and likely is currently receiving stormflows from the site. In the absence of a comprehensive stormwater management plan for the site, it should be assumed that this is happening.

		This should be included in historic and current flow conditions discussed in this bullet point.
4	**1.2** **4**	*(From the fifth bulleted item)* The introduction of COIs into the drain from sources other than the mine has not been accessed. Subsequently, stating that they are known to be part of the issues with the Drain is incorrect. The statement "There are multiple natural and anthropogenic sources of COIs to soils, sediments, and surface water in the Wabuska Drain" is not correct. It would however be correct to state "There are potentially multiple natural and anthropogenic sources of COIs to soils, sediments, and surface water in the Wabuska Drain"
5	**1.2** **4**	*(From the sixth bulleted item)* See the second general comment below.
6	**2.1** **7**	The statement "the drain currently serves as one of many irrigation-flow ditches in Mason Valley" should be modified. The limited number, which should be described here, are included in "Public Information for the Northern Portion of the Background Groundwater Study Area Revision 1" from August 5, 2013. Figure 3 is particularly insightful showing the 5 major ditches and one principle drain.
7	**2.5** **14**	The document fails to properly describe the Wabuska Drain in vicinity of the Reservation. See third general comment below.

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Specific Comments (continued):

#	Section Page	Comment
8	**2.5** **15**	Statements regarding homes and the Drain need to be revised. In addition to the comment offered in the third general comment below, homes 0.5 miles and possibly even closer may not have any real effect on the drain. Including these in the discussion has the potential to mistakenly lead to the assumption that the homes are part of the COI input into the drain and associated materials when drainage from the homes goes to roadside ditches and other features not associated with the Drain. This discussion should be improved by using topographical maps to actually defined principle sources to the drain as indicated in the fourth general comment.
9	**3.2** **16**	This section should include reference to erosion/stormwater transport from the site as indicated above.

10	3.2 16	There is a reference to the railroad that is mentioned in this section. Is this a reference to the potential for spills associated with the railroad? Did the railroad service the mine? This may require some explanation.
11	3.2 16	There were historic spills documented at the site. These sudden and sometimes large releases may or may not have reached the Drain or could have been carried by secondary events as stormwater off of the site.
12	3.3 17	The reference to percolation to shallow groundwater is too specific. It may assume that there is better division between the shallow and deeper groundwater that actually exists. In addition, in the area of the drain and irrigated fields may have a downward gradient significant to releases from the drain. The phrase "COIs that may subsequently be transported via surface water or percolation through the vadose zone to shallow groundwater" should read "COIs that may subsequently be transported via surface water or percolation through the vadose zone to groundwater." This may be addressed in more detail as the second general comment below is addressed.
13	3.4 17	See second general comments
14	4.2.2 21	The statement "Exposures to mine-related constituents via biota….that have contacted OU-7 exposure media are anticipated to minor" is incorrect. The sixth general comment below summarized the issue but in general the area around the drain would be prime for small game such as doves, rabbits and quail. Its close proximity to rural residential and Tribal residential and BLM land mixed with agricultural provide access to residents including children and teens to easily and frequently harvest these animals.
15	4.2.3 21	Without reference to the Tribal wetlands, this section should be completely re-written.

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Specific Comments (continued):

#	Section Page	Comment
16	5.2 26	The reference to yellow bill cuckoo and riparian willow and cottonwood habitat is oversimplified. There is some habitat on the Drain and, more important, habitat is often very close by along the Campbell Drain and other water features. The location of this habitat is close enough that the

		drain should be is not truly separate, isolated, habitat.
17	**5.2** **26**	The mention of habitat assessments in the last paragraph of this section requires some kind of reference. Who produced them? When? The data could be very important to this discussion but not enough detail is provided.
18	**Figure 3-1**	Flow into the wetlands is intermittent. Not always a flow out; this also affects the exposure to wildlife: it includes contaminated sediment usually associated with storm flows.

General Comments:

19. One of the most important deficiencies in the document is the lack of discussion regarding the Perazzo slough and the associated Tribal Wetlands. This is important to properly categorizing the Wabuska Drain and managing its effect on the Tribe's cultural resources. See attached discussion.

20. There is not been an analysis of the available shallow and intermediate groundwater data collected in the vicinity of the Wabuska as part of OU1. This analysis is needed to properly plan the OU7 program proposed in this document. The Tribe has indicated the need for this analysis and the lack of it is now delaying the processing of this plan and subsequently the RI for OU7. Adding to this, statements in this document regarding groundwater in the vicinity of the Drain are not truly supported by data analysis and exceed the expectations of the research by reviewers. A DSR or similar document focusing on groundwater data that can be used as part of the OU7 RI development is needed as soon as possible.

21. The document fails to describe the reach of the Wabuska Drain as it flows through the Reservation. The housing in the area is not on the Drain, there is a significant distance between the homes and the Drain. Additionally, the homes are not on lots adjacent to the Drain and in fact are not even on the Reservation. The Drain is associated with and adjacent to agriculture designated lands on the Reservation. The Drain is part of the Perazzo Slough and Tribal Wetlands on the Reservation.

22. Although not comprehensive, presentation of topographical maps that show roadside ditches and other significant features that discharge to the drain is needed to determine the best sampling points and understand the potential for other COI (non-mine) sources.

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General Comments (continued):

23. The phased (Phase 1 first described in Section 4.1 on page 18) assessment concept may be considered with the assumption that if the northernmost reach of the Drain shows lower concentrations of COIs than the southern reaches, a limit of contamination is found. This

assumes that releases were constant and concentrations are diminishing with distance. Current data shows that the ditch has been maintained using, among other practices, excavation and has been rerouted. In addition, releases were not constant over time with stormwater releases, high groundwater events and other mechanisms sending pulses of contaminated water and sediment downstream. High groundwater events also could possible release contaminated material into the ditch to the north of the site. The gradient also varies with distance and localized low spots can result in deposits of contaminated materials serving as secondary sources well away from the mine site.

Of particular concern are the Tribal wetlands and connected reaches of the Perazzo Slough. When water levels were historically higher in the Wabuska Drain, inundation of the wetlands and slough were not unlikely and consistent with elevations and irrigation equipment design in the area. These areas may also be of concern in regards to ecological and human health risk. These areas not only warrant investigation in the earliest phase of assessment but may require some preliminary actions.

With this in mind, the entirety of the Drain should have some assessment with the more concentrated assessment including the northern boundary of the Reservation at a minimum. There is no reason to delay a useful and comprehensive assessment.

24. The recreational user references in Section 4 and related exposure discussion does not effectively identify exposure by hunting. This activity, shared with both Tribal members and non-Tribal members can include rabbits, doves, quail, chucker and other upland game along with migratory waterfowl. The use of hunting dogs can add to the exposure as dogs bring sediment, water and other media directly into homes. The study area includes BLM lands, agricultural area et cetera that can be popular for harvesting these animals plus small game is often harvested closer to home. This includes children harvesting game with air rifles, small bore rifles and even shotguns in rural residential areas.